

- 1-32.** (canceled)
- 33.** A method comprising:
 receiving, by an apparatus, wireless communication service from a first access point;
 detecting, by the apparatus, a change in fingerprint data relating to available access points;
 correlating, by the apparatus, recent history data of a series of fingerprint data with history data comprised by a history database;
 determining, by the apparatus, in response to the correlation and by using the fingerprint data and the history data, a second access point; and
 triggering a handover from the first access point to the second access point.
- 34.** The method of claim **33**, further comprising:
 estimating, by the apparatus, a route of a user by correlating at least two most recent fingerprint data of the history data with the series of fingerprint data reflecting earlier movement of the user; and
 determining, by the apparatus, using the fingerprint data and the estimated route, the second access point.
- 35.** The method of claim **33**, further comprising:
 determining, by the apparatus, using the fingerprint data and the history data, the second access point being unavailable; and
 notifying, by the apparatus, a user of an apparatus before disconnection of the wireless communication service from the first access point.
- 36.** A method comprising:
 determining, by an apparatus, fingerprint data relating to available access points;
 comparing, by the apparatus, the fingerprint data to known fingerprint data of a fingerprint database;
 updating, by the apparatus, the fingerprint database in response to the comparison revealing new fingerprint data; and
 storing, by the apparatus, history data of series of fingerprint data reflecting earlier movement of a user to a history database.
- 37.** The method of claim **36**, further comprising:
 determining, by the apparatus, the fingerprint data relating to available access points using sensors of an apparatus; and
 storing, by the apparatus, the fingerprint data to the history data of a series of fingerprint data.
- 38.** The method of claim **36**, further comprising:
 determining, by the apparatus, the fingerprint data relating to available access points using sensors of an apparatus;
 transmitting, by the apparatus, the fingerprint data to a crowdsourcing server;
 updating, by the apparatus, the fingerprint data to a crowdsourcing fingerprint database at the crowdsourcing server; and
 receiving, by the apparatus, fingerprint data comprising at least part of the crowdsourcing fingerprint database.
- 39.** The method of claim **36**, wherein the fingerprint data comprises at least one of the following:
 access point identifiers of available access points;
 received signal strengths (RSS) associated with the available access point identifiers;
 received signal-to-noise ratios (SNR) associated with the available access point identifiers;
 location information; and
 timing information associated with the available access point identifiers.
- 40.** An apparatus, comprising:
 a communication interface configured to receive wireless communication service from a first access point;
 a sensor configured to detect fingerprint data;
 a processor;
 a memory including computer program code;
 the memory and the computer program code configured to, with the processor, cause the apparatus to:
 detect a change in fingerprint data relating to available access points;
 correlate recent history data of a series of fingerprint data with history data comprised by a history database;
 determine, in response to the correlation and by using the fingerprint data and the history data, a second access point; and
 trigger a handover from the first access point to the second access point.
- 41.** The apparatus of claim **40**, wherein the memory and the computer program code are further configured to, with the processor, cause the apparatus to:
 estimate a route of a user by correlating at least two most recent fingerprint data of the history data with the series of fingerprint data reflecting earlier movement of the user; and
 determine, using the fingerprint data and the estimated route, the second access point.
- 42.** The apparatus of claim **40**, wherein the memory and the computer program code are further configured to, with the processor, cause the apparatus to:
 determine, using the fingerprint data and the history data, the second access point being unavailable; and
 notify a user of the apparatus before disconnection of the wireless communication service from the first access point.
- 43.** The apparatus of claim **40**, wherein any of the access points comprises at least one of the following:
 a wireless local area network (WLAN) access point;
 a Bluetooth access point;
 an ultra-wideband access point; and
 a cellular network base station.
- 44.** The apparatus of claim **40**, wherein the memory and the computer program code are further configured to, with the processor, cause the apparatus to:
 maintain the fingerprint data in a fingerprint database; and
 maintain the history data in the history database.
- 45.** The apparatus of claim **44**, wherein the fingerprint database may be located in at least one of the following:
 a user apparatus; and
 a server apparatus.
- 46.** The apparatus of claim **44**, wherein the history database may be located in at least one of the following:
 a user apparatus; and
 a server apparatus.
- 47.** An apparatus, comprising:
 a sensor configured to detect fingerprint data;
 a processor;
 a memory including computer program code;